



YETDA INDUSTRY LTD.

Technical Data Sheet

MODEL NO : 776RGB4B-GH

3528 Package 3.5*2.8mm RGB Top LEDs

Features :

- Package in 8mm tape on 7" diameter reel
- Compatible with automatic placement equipment
- Compatible with reflow solder process

Applications :

- Indicators
- Automotive : backlighting in dashboard and switch
- Backlight for LCD

Dice material	Emitted color	Lens Color
AlGaInP/GaAs	Orange	White Diffuse
InGaN	Green	
InGaN	Blue	

Electrical/Optical Characteristics(Ta=25°C)

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Dominant wavelength	I _F =20mA	O	615	622	630	nm
		G	515	520	525	
		B	460	465	470	
Spectral half bandwidth	I _F =20mA	O		19		nm
		G		33		
		B		24		
Forward voltage	I _F =20mA	O	1.7	2.0	2.5	V
		G	2.8	3.1	3.7	
		B	2.8	3.1	3.7	
Luminous intensity	I _F =20mA	O	160	320	500	mcd
		G	630	1200	2000	
		B	160	200	400	
Viewing angle at 50% I _v	I _F =10mA	2θ 1/2		120		Deg
Reverse current	V _R =5V	I _R			10	μA

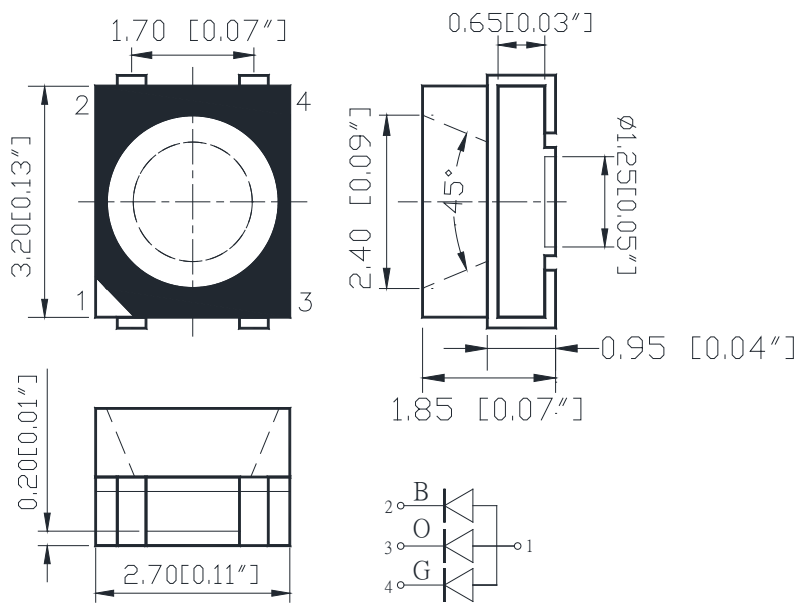


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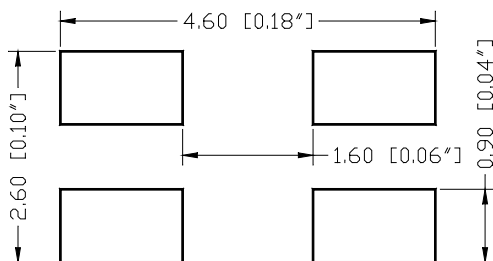
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Value	Unit
Power dissipation	O	75	mW
	G	111	
	B	111	
Forward current	I _F	30	mA
Reverse voltage	V _R	5	V
Operating temperature range	T _{op}	-20 ~+80	°C
Storage temperature range	T _{sig}	-40 ~+80	°C
Peak pulsing current (1/10 duty f=1kHz)	I _{FP}	125	mA

PACKAGING DIMENSIONS (mm):



RECOMMEND PAD LAYOUT



Notes: All dimensions are in millimeters (inches) ;

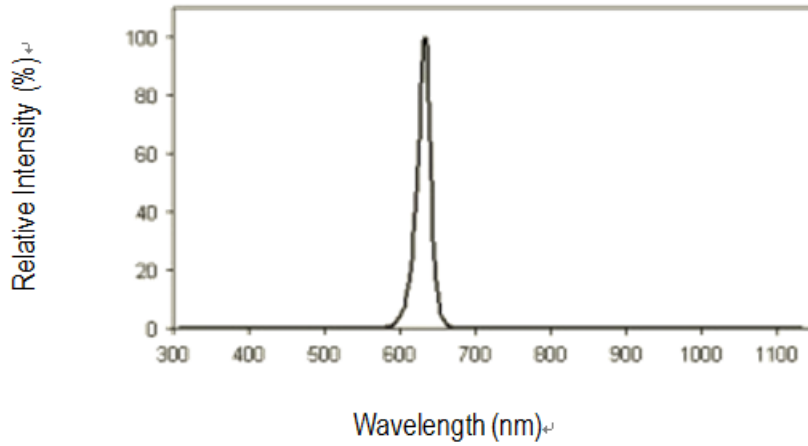
Tolerances are $\pm 0.2\text{mm}$ (0.008inch) unless otherwise noted



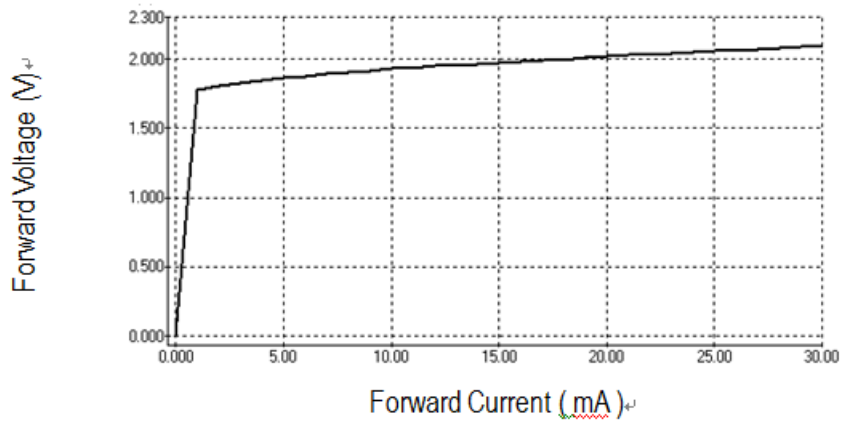
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OPTICAL CHARACTERISTIC CURVES (Orange)

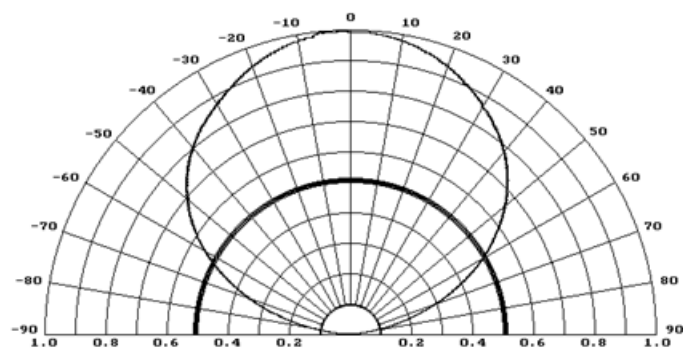
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Directive Characteristics

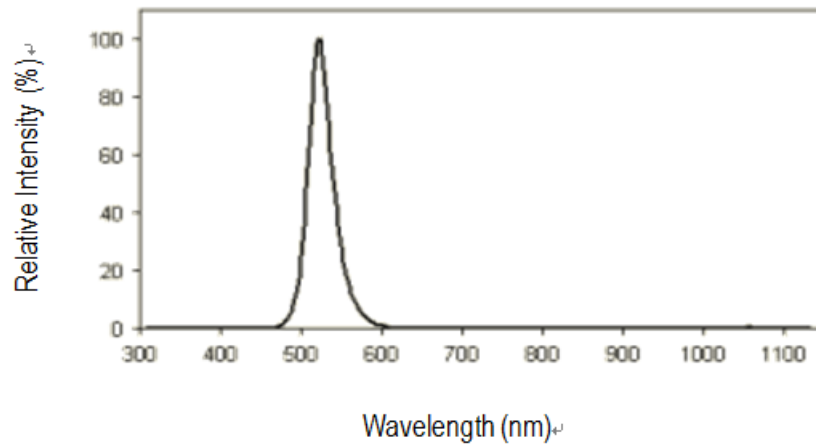




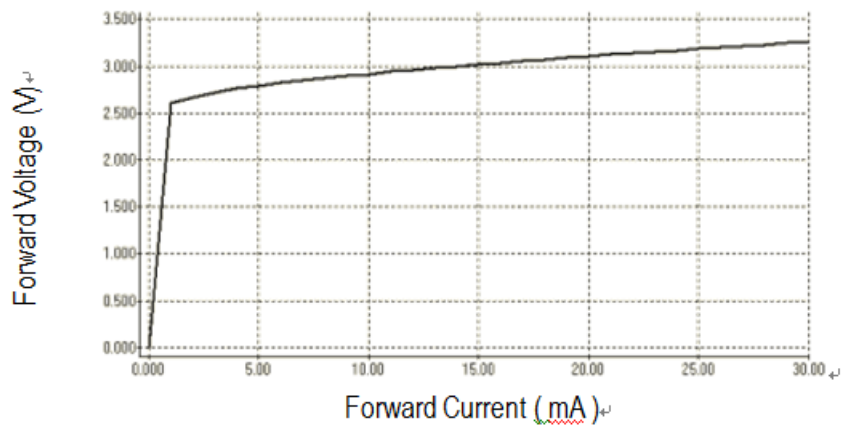
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OPTICAL CHARACTERISTIC CURVES (Green)

Relative Intensity vs. Wavelength

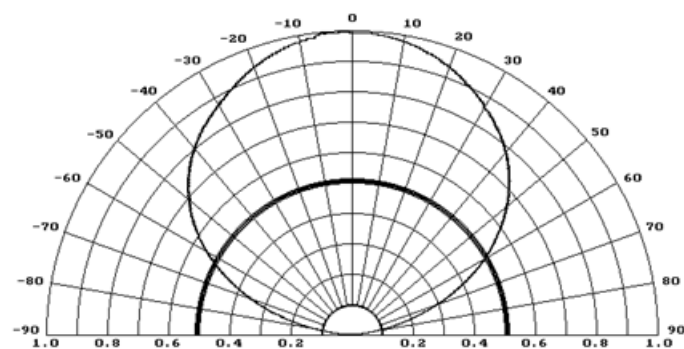


Forward Current vs. Forward Voltage



Directive Characteristics

Directive Characteristics

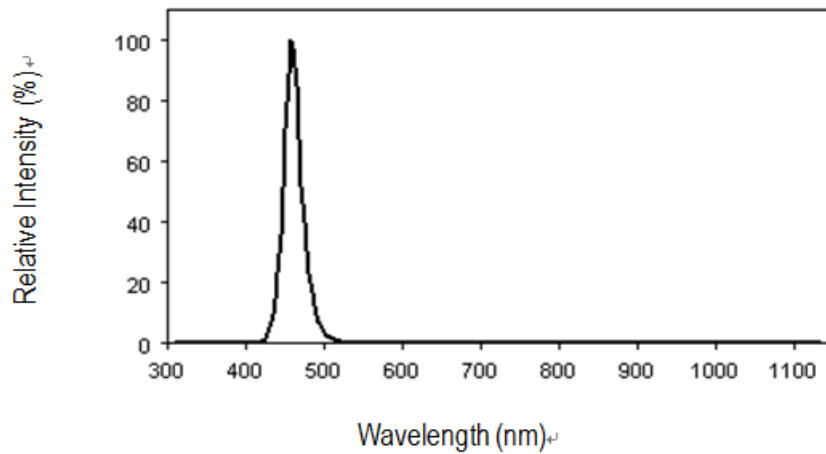




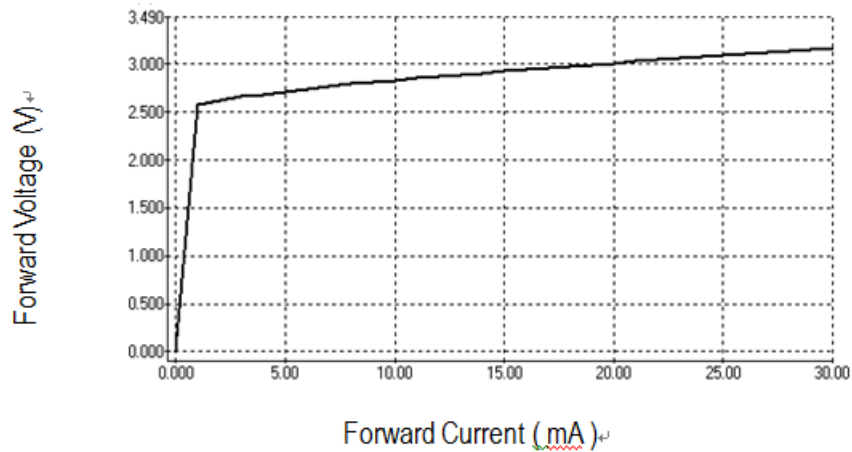
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OPTICAL CHARACTERISTIC CURVES (Blue)

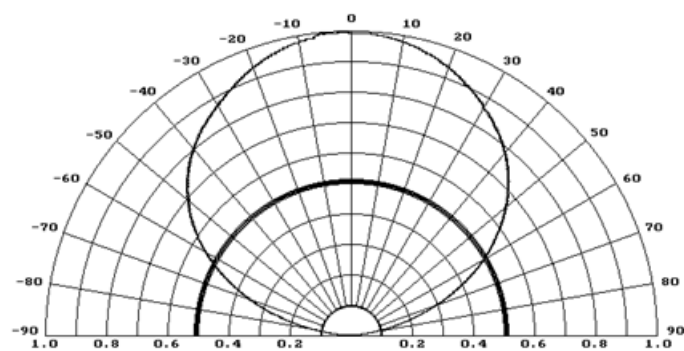
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



Directive Characteristics

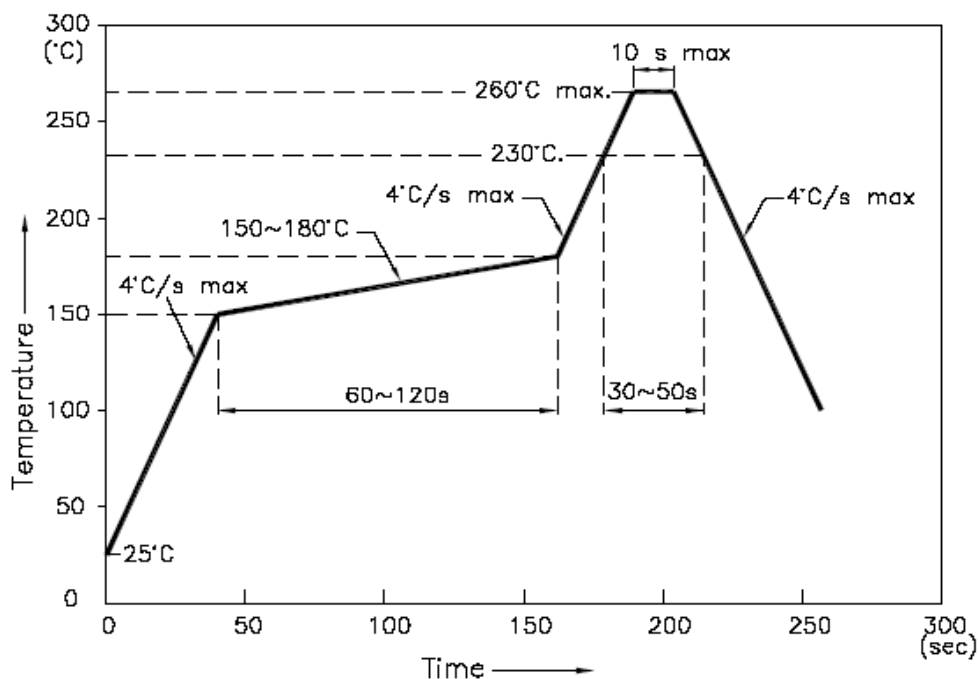




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Precautions For Use :
Over - current - proof
Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen)
Storage
1. The operation of temperature and R.H. are : $5^{\circ}\text{C} \sim 30^{\circ}\text{C}$, 60%R.H. Max.
2. Once the package is opened, the products should be used within a week. Otherwise, they should be kept in a dampproof box with desiccating regent. Considering the tape life, we suggest our customers to use our products within 1.5 year (from production date) .
3. It's recommended to bake before soldering when the package is unsealed after 72 hrs. The condition is : $60^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 15hrs.

■ Reflow Temp/Time



NOTES:

1. We recommend the reflow temperature $245^{\circ}\text{C} (\pm 5^{\circ}\text{C})$. the maximum soldering temperature should be limited to 260°C .
2. dont cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.



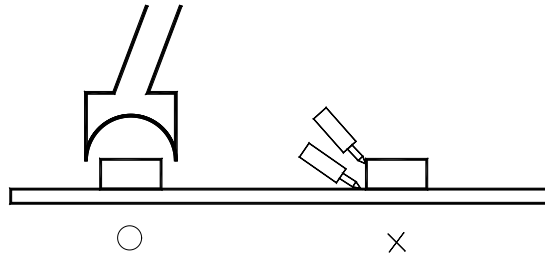
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■Soldering iron

Basic spec is $\leq 5\text{sec}$ when 260°C . If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1\text{sec}$). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable. Surface temperature of the device should be under 230°C .

■Rework

1. Customer must finish rework within 5 sec under 260°C .
2. The head of iron can not touch copper foil
3. Twin-head type is preferred.



- **Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow 、 solder etc.**